

IN THE CLAIMS:

Claims 1-8 (cancelled)

9. (currently amended) A digital-to-phase converter, comprising:  
a delay line having a plurality of delay taps;  
a multiplexor coupled to the delay line, the multiplexor having a plurality (N) of  
input ports for receiving the plurality of delay taps and an output port for providing an  
output signal and an input port for receiving an n-bit binary word (IN);  
a synchronization circuit having a first input port for receiving the output signal  
from the multiplexor and a second input port for receiving a trigger signal, the  
synchronization circuit further having an output port for providing an output signal only  
when the synchronization circuit is gated by the trigger signal (TRIG); and  
a reference clock providing a reference signal (REF) to the delay line and the  
synchronization circuit ~~A digital-to-phase converter as defined in claim 7, wherein the~~  
reference signal (REF) is a pulse train having rising and falling edges and the  
synchronization circuit forms an aperture region when IN <= N/2 that begins on the first  
rising edge of the reference signal (REF) after the first rising edge of the trigger signal  
(TRIG) signal and remains active for a predetermined period thereafter.

10. (Original) A digital-to-phase converter as defined in claim 9, wherein the  
predetermined period that the aperture region formed by the synchronization circuit  
remains active is approximately 3/2 the period (Tref) of the reference signal (REF).

11. (Original) A digital-to-phase converter as defined in claim 9, wherein the synchronization circuit forms an aperture region when  $IN > N/2$  that begins on the first falling edge after the first rising edge of the reference signal (REF) after a trigger signal (TRIG) has occurred and the aperture region remains active for a predetermined period of time.

12. (Original) A digital-to-phase converter as defined in claim 11, wherein the predetermined period of time that the aperture remains active is for approximately  $3/2$  the period ( $T_{ref}$ ) of the reference signal.

Claims 13-16 (canceled)